

"Dedicated to Public Service"

# THE RADIATOR



W6RHC  
IRL #8170  
Echolink #322788



<http://www.gearsw6rhc.org>

P.O.Box 508 Chico, CA 95927-0508

Founded: August 13, 1939

April, 2016

## Coming Events

### O.A.R.S. GENERAL MEETING

Second Friday, of month, 7:00 p.m., at St. Paul's Church Parrish Hall, 1430 Pine St., Oroville

G.A.R.S. Second Thursday of month, 4:30 p.m. Lutheran Church Hall, Artois; 4:30 p.m.

G.E.A.R.S General Meeting, third Friday of month, Butte County Search and Rescue Bldg., Chico. Social hour 6:30, meeting at 7:00.

Board Meetings: 2nd Saturday of month

Butte A.R.E.S. MEET: fourth Friday, at Butte County Search and Rescue Building.

### FCC EXAMS - GEARS VEC

First Sunday of every even numbered month. At the Butte County Search and Rescue Building. Written test at 2:00 p.m. For information or pre-registration call Tom Rider -W6JS; 530-893-9211

Club Events: News and items of interest  
GEARS Calendar...all inside.

Website: [www.gearsw6rhc.org](http://www.gearsw6rhc.org)  
[www.gearsw6rhc.org](http://www.gearsw6rhc.org)



Picture courtesy EVARC

## The Prez' Says:

QST de KA6GND



What a beautiful time of year – the winter storms are almost past us and the weather is beautiful. Good days to get outside and check how our antennas fared the winter, and start erecting those new antennas that we thought about all winter. That's what's going on at my QTH as I look forward to being able to operate bands and modes that I have not been able to get on for quite some time. Here's to new beginnings!

I truly hope that by now you have completed the club survey and if not I urge you to do so as soon as you can. I and the Board members really want to help the club to be all that it can be for now and the future, your input is crucial.

At this month's club meeting Scott, KE6VUS will be presenting a program on the MESH network, a whole new way of expanding our horizons. Be sure to start looking through all of your cubby holes, closets, garage, workshop and anyplace else for those "treasures" - items that you have held on to just in case you may someday use it. Well, it may be time to make that decision that maybe you won't ever use it but it just might be that thing that someone else could sure use. At our May meeting is our annual GEARS auction. This event so helps our club treasury and could bring you a few bucks if you desire. We hope that this year is huge – spread the word, dust off those items and mark your calendar for Friday, May the 20<sup>th</sup>.

Anna, KG6ZOA is again chairing our participation in the annual Wildflower bike run. Please contact Anna as soon as possible if you can help out on this. This is a great opportunity to exercise our radio capabilities in the field and show the public what a valuable and fun resource that we are.

"The sky is the limit with amateur radio"

Larry Marcum, KA6GND  
GEARS club president  
530-345-5399 or [ka6gnd@gmail.com](mailto:ka6gnd@gmail.com)

**MINUTES OF GENERAL MEETING for Mar 18 2016****QTH- Location?****QSL- Acknowledge receipt?****QRU- Have you anything for me?****Introductions:****PROGRAM: Robert W6RQR. Contesting.**  
Next program will be Mesh Network by Scott KE6VUS.**ATTENDANCE: All officers present.****Club server complete and on the network.****ANNOUNCEMENT:****A club a breakfast Sat Apr 23 Farmers Skillet.**  
9am.**Next board meeting is on Apr 9 at 9am at Blood-Source.****May will be our auction.****June will be field day.****July Bob Hiel K9EID, ham nation via Skype.****Stephen McDermott will Work All States.****Repeater tsq1 is now active.****Show and Tell:****Rick Hubbard KI6VOS on the arrow antenna.****VEC: APR 3<sup>rd</sup> possibly one.****MINUTES: Approved the minutes from Feb meeting.****TREASURER: Completed audit. The treasurer report for 2015 is \$3290.10 approved.****Field Day: Bands still open: first come first served. Need band captains.****Wildflower:****Currently waiting for VELO cycling club meeting. Currently missing a few people for locations.****Open mike: Adding a Elmer bar.****ADJOURNMENT: 20:45 hr.****Dale Anderson,**  
**Secretary****Board of Directors Meeting: Mar 12 2016****ATTENDANCE Anna Horn not present.****MEMBERSHIP APPLICATIONS:****One application no info. Rick left it at home.****OLD BUSINESS:****Minutes of Feb 13 board meeting approved.****Treasurers report:****The annual report is complete.****NEW BUSINESS:****Committees:****Raffle: Need more supplies, but we have enough for one more raffle.****Field Day:****Michael Favor will be at Platt Mt. this year. We ask for tables for the barbeque and literature handouts.****Net Manager:****Possibly adding a Elmer section to the net.****VEC:****Tom has suggested going to Sacramento for a CW only testing. Tom has volunteered to do the cooking at the field day and the steak bake.****Classes:****No classes till June or July.****Programs:****Larry wishes to limit the programs to 30 to 45 minutes, discussion followed. It will be in the survey.****Show and tell:****Adding a 5 minute showing of any one's new gear to the general meeting.****Repeater Trustee:****Larry has volunteered to be the new repeater trustee.****Survey:****The club survey has been released.****The board is looking in to changing our insurance carrier.****ADJOURNMENT: 11:30 am****Dale Anderson,**  
**Secretary**

## MEMORANDUM FOR THE RECORD

TO: GEARS Members

FROM: Rick Hubbard [KI6VOS]; CY2015-2016 Treasurer

DATE: 21 Mar 2016

SUBJECT: Treasurer's Annual Report to Members for CY2015

### SUMMARY

For calendar year 2015 (CY2015), the Golden Empire Amateur Radio Society (GEARS):

- Began CY2015 with an Available Book Balance of \$1,107.76\*,
- Received Income from All Sources of \$4,391.15,
- Expended \$2,208.81, and
- Ended CY2015 with an Available Book Balance of \$3,290.10\*.

#### Many Generous Donations

GEARS gratefully acknowledges that a significant portion of our Clubs' current financial condition is attributable to many **generous CY2015 donations totaling: \$1,930.**

#### Financial Transactions Details

Details of GEARS CY2015 Income and Expenses are available online; here's a link to the applicable Google Docs Sheet:

<https://docs.google.com/spreadsheets/d/1TD54vFXyDaAZGacsylVJJIGVvmoN3QERGRqgyjCEtM/edit?usp=sharing>

**\*NOTE: On behalf of the Butte County ARES group, GEARS is holding \$1,000.00.**

**Because these funds are not GEARS' property, they are not included in the amounts listed above.**



KI6VOS Rick Hubbard, Treasurer

### Why Bother to Contest—i.e. What's the Point?

Said Robert Lasso-W6RQR of Paradise, an avid contester, and our program speaker last month. Robert then held the rapt attention of members as he recounted his odyssey from a lukewarm Ham to a passionate, award winning Contester!

Contesting is a challenge, an opportunity to practice your skills, to do serious operating, to know your equipment and test it's operational adequacy.

To be an effective contester, or for that matter, just effective whenever on your radio, do the following:

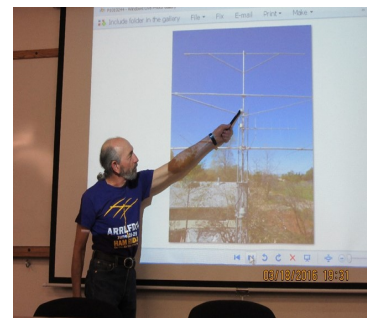
Make sure everything works-check your equipment before you Engage it.

Use your keyboard and computer rather than writing everything down and then entering your information into the computer.

Contesting via the medium of "cw" as his medium, he advises Courtesy is to try to match the cw speed of a contactee.

W6RQR uses the NIMM logging program. It is a huge software program, built for contesting only, and is FREE.

The oldest contest of record is from 1930, the ARRL Sweepstakes. This contest has become a tradition, occurring during the month of November.



Some sites Robert Recommends, among many others: [www.ncjweb.com/NAQP-Rules.pdf](http://www.ncjweb.com/NAQP-Rules.pdf)

### Rules: 2016 North American QSO Party (CW/SSB/RTTY)

1. **Eligibility:** Any Amateur Radio licensee may enter.
2. **Object:** To work as many North American stations as possible during the contest period.
3. **North American Station:** Defined by the ARRL *DXCC List*, with the addition of Hawaii.
4. Contest periods:

#### January/February 2016 Events

CW: 1800 UTC January 9 to 0600 UTC January 10, 2016 (second full weekend in January)

SSB: 1800 UTC January 16 to 0600 UTC January 17, 2016 (third full weekend in January)

RTTY: 1800 UTC February 27 to 0600 UTC February 28, 2016 (starts on last Saturday in February)

#### July/August 2016 Events

RTTY: 1800 UTC July 16 to 0600 UTC July 17, 2016 (third full weekend in July)

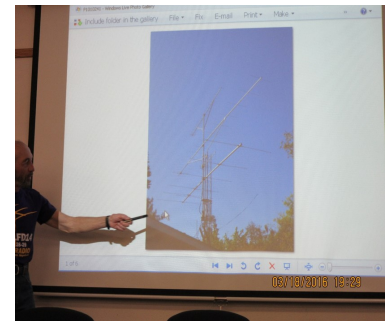
CW: 1800 UTC August 6 to 0600 UTC August 7, 2016 (first full weekend in August)

Information on this site is extensive.

Also recommended:

**California QSO Party:** this is the 51st Running Of The CQP!  
1600 UTC October 1, 2016 to 2200 UTC October 2,

Search the Internet for contest sites, they are numerous.





## ARROW II SATELLITE ANTENNA



At the GEARs meeting on 18 Mar 2016, Rick Hubbard (KI6VOS) delivered a short presentation on the ultra-portable, dual-band (VHF & UHF) Yagi Arrow II Satellite Antenna...along with brief remarks regarding using it with two HTs to work satellites.

The Arrow Model 146/437 - 10 WBP antenna is designed, manufactured and sold by Arrow Antenna, LLC of Cheyenne, WY ([www.arrowantennas.com](http://www.arrowantennas.com)).

Rick pointed out the Arrow Model 146/437 is cleverly manufactured from aluminum archery arrow shafts (it's believed by many to be the source of the word 'Arrow' in the manufacturer's name).

The Model 146/437 is engineered to be an ideal for working satellites. Because of its dual-band design, the Model 146/437 can simultaneously receive VHF (satellite downlink) and transmit UHF

(uplink). In Rick's case—doing so involves the use of two five watt HTs (a Yaesu VX-6R and a Yaesu FT-60R).

The Arrow 146/437 is ultra-light. Weighing approximately 1.5 pounds (~0.7kg)—and quickly disassembled/assembled—the 146/437 is designed to accommodate both handheld and mounted operations.

When disassembled, Rick keeps his 146/437 "at the ready" in a small carrying pouch in the trunk of his car.

.Rick stressed: **The 146/437 is not restricted to satellite use!**

The 146/437 is a fully functional VHF/UHF Yagi.

In fact, Rick added, he has used his Arrow a few times to join GEARs Weekly Club-Net (Tuesdays, 2000 Local, via W6RHC repeater on 146.850).



When handheld, the manufacturer cautions operators to restrict transmission power to 10 watts, or less. When mounted and stationed a safe distance from humans (as every thoughtful Ham Radio Operator mindful of 47 C.F.R. 1.1307 would do), the 146/437 can support TX up to 150 watts.

The 146/437 ships with BNC feed line connectors...which are completed with Gamma Matches for both VHF (Downlink) and UHF (Uplink).

**Cables and Connectors: Lots!**

Rick pointed out that the 146/437's dual-band engineering—which enables simultaneous downlink and uplink with two HTs—does necessitate multiple cables and connectors to feed a signal to/from the 146/437's BNC connectors.



Arrow  
146/437  
VHF  
Gamma  
Match on  
BNC  
Feedline  
Connector.

**Downlink**



Arrow  
146/437  
UHF  
Gamma  
Match on  
BNC  
Feedline  
Connector.

**Uplink**

To connect his radios, Arrow II, cables and connectors Rick's operating configuration includes:

Function	Device	Retail Price (Est)
VHF Downlink	Yaesu FT-60R (Female SMA antenna connector)	\$144.95
VHF Downlink	Comet HS-10 SMA Male to SO-239 (UHF Female) Cable: 36 inches	\$15.95
VHF Downlink	PL-259 (UHF Male) to PL-259 (UHF Male) RG8X: 36 inches	\$5.99
VHF Downlink	Comet HS-05 SO-239 (UHF Female) to BNC Male: 18 inches	\$11.95
Antenna	Arrow Model 146/437 (BNC Female feedline connectors)	\$69.95
UHF Uplink	Comet HS-05 SO-239 (UHF Female) to BNC Male: 18 inches	\$11.95
UHF Uplink	PL-259 (UHF Male) to PL-259 (UHF Male) RG8X: 36 inches	\$5.99
UHF Uplink	Comet HS-10 SMA Male to SO-239 (UHF Female) Cable: 36 inches	\$15.95
UHF Uplink	Yaesu VX-6R (Female SMA antenna connector)	\$245.95
Satellite Schedule	Satellite Explorer Pro App v1.11 for iPhone	\$0.00
Rick's Total Estimated Investment (not including tax and shipping):		\$528.63

## Finding a Satellite to Work

Given Chico's northerly latitude (roughly ~40N), satellites—including the International Space Station (ISS)—are “visible” for Ham operations in relatively brief bursts. Fortunately, satellite orbits are quite predictable and there are many sources of data for tracking and predicting satellite flybys.

Key data regarding working a satellite on a flyby includes: designation (name) of satellite; azimuth (magnetic bearing from North) and time for “AOS” (Acquisition of Signal); maximum elevation (above horizon); azimuth and time for “LOS” (Loss of Signal); and downlink & uplink frequencies.

In the United States, “AMSAT” (the Radio Amateur Satellite Corporation, formed in 1961 with the launch of the first Ham Radio in Space, OSCAR-I; see: [www.amsat.org](http://www.amsat.org)) is one such source for satellite data.

In addition to AMSAT, there are many Apps available (for both iOS and Android devices) that can be used to predict a satellite's visibility above the radio horizon.

Rick has tested several satellite tracking & prediction apps on his iPhone, and—somewhat reluctantly, at the moment—uses Satellite Explorer Pro (v1.11). Why reluctantly? Although SEP is free, according to Rick's comments during the demo, “...*Satellite Explorer Pro is great when you know the specific satellite you want to work and its frequencies. Unfortunately, the current version of SEP does not address the question of ‘which satellites will be workable at my location and when?’ Nor does SEP conveniently provide frequency data...which I research in advance and pre-program into my Yaesu HTs.*” Rick added that “*SEP's limitations are so frustrating—I'm thinking of writing my own iPhone App to provide these valuable functions.*”

## Summary: A Great Portable Antenna

The Arrow II Satellite Antenna is a versatile, lightweight, ultra-portable and effective VHF & UHF Yagi. It is also quite economical, well-manufactured and easy-to-use. Although ‘Satellite’ is in its name, this Arrow provides great two-way VHF/UHF communications regardless of altitude or azimuth.

## WORLDWIDE REPEATER DIRECTORY

“RFinder—The Worldwide Repeater Directory— now will include coverage maps for all repeaters on Earth. In February, the ARRL established an agreement with RFinder, the creator of a web-ad app-based directory of Amateur Radio Repeaters worldwide, to serve as its preferred online resource of repeater frequencies. RFinder has partnered with CloudRF.com to provide the maps.

“Our systems are busy rendering and indexing coverage maps, based on ground-path loss using the Longley-Rice irregular terrain model,” explained RFinder creator Bob Greenberg, W2CYK. We have worked with Alex Farrant, M6ZUJ, creator of CloudRF.com, to render coverage maps for nearly the entire collection of repeaters in RFinder’s database.”

RFinder has downloaded and will serve as a host for KMZ (Keyhole Markup Language Zipped) overlays for Google Earth. The resulting KMZ place marker files will be viewable in Google Earth on Windows and Mac platforms (web.rfinder.net and routes.rfinder.net) and on Android and iOS versions of RFinder. The windows and Mac versions allow the viewing of multiple coverage maps at the same time. As part of this project, RFinder will provide free access to repeater coordinators worldwide. As coordinators update repeaters with height above average terrain (HAAT) , power and gain, and latitude and longitude, maps will be automatically re-rendered within a few minutes and made available to subscribers.

The sign up procedure for the repeater coordinator program will be announced later this month. The new capability is expected to ease the work of repeater coordinators, as they will easily be able to see repeater coverage maps side by side for both coordinated and uncoordinated machines—information critical as simplex nodes for internet linking, cross-band repeaters, and homebrew repeaters crop up worldwide.

(next column)

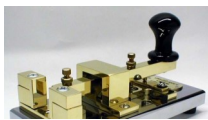
Users of the trial version of RFinder on Android will have access to coverage maps for a limited time, after which only subscribers will have access. An annual \$9.99 RFinder subscription provides access to repeater data worldwide.

-#-

From The ARRL Letter for March 17, 2016

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## The First Wireless Hack Was a Bunch of Morse Code Spam



One scientist had a message for his rival, and it was "rats rats rats."

In 1901, Guglielmo Marconi was all set to demonstrate wireless transmission in England was going apace. Marconi had many rivals, and a pretty substantial ego. The latter led him to claim that his signals couldn't be interrupted or encroached on. The former led to someone proving him wrong. As Marconi set up for his big wireless demonstration, a transmission across England via morse code, a signal intrusion occurred.

A rival inventor, Nevil Maskelyne, had one message for Marconi: rats, rats. Rats. Also, rats. Then some lines from Shakespeare, and other taunts for Marconi. The moral of the story? Hackers are nothing new. It wasn't invented on BBSes in the 80s, or by Kevin Mitnick or phone phreakers. Basically, as long as there's a technology out there, someone will find a way to exploit it for their own amusement and poke at its weaknesses. But often that's the best way to make tech stronger on more secure. How can you fix it unless you know how it can be broken?

Source: [Tom Scott](#) Popular Mechanics - on line 3/30/16

Message from John Stettler, Section PIC

Greetings, Here is a message from the Sac Valley District 3 Emergency Coordinator. He has a useful brochure that you or your club may find valuable in the public information activities. John Stettler, Section PIC

----- Forwarded Message -----

From: greg Kruckewitt <[kg6sjt@gmail.com](mailto:kg6sjt@gmail.com)>  
To: John Stettler <[ki6dwp@yahoo.com](mailto:ki6dwp@yahoo.com)>  
Sent: Sunday, March 13, 2016 10:47 PM  
Subject: A

Hi John,

It occurred to me that I should send this info to you are you are the PIO! I have sent to all ARES DECs and ECs.

If you give talks about ARES to radio clubs, service groups, served agencies, I have created a tri-fold brochure that contains information about ARES and contact information for the ECs in the Sacramento Valley Section that you can hand out that .

The Sacramento Valley Section ARES Tri-fold brochure PDF has a "fill-in box" so you can fill in your ARES group's contact information information on the back side.

<http://tinyurl.com/guvp7ze>

There is a link to the brochure on the home page of [www.sacvalleyares.org](http://www.sacvalleyares.org).

I hope the rains aren't causing too many problems in your area.

Cheers!  
greg

--

Greg Kruckewitt, KG6SJT  
ARRL Sacramento Valley Section  
District 3 Emergency Coordinator  
[kg6sjt@gmail.com](mailto:kg6sjt@gmail.com)  
[www.sacvalleyares.org](http://www.sacvalleyares.org)

530-219-0611 cell  
530-753-3296 home

MSG. via packet BBS: [kg6sjt@ag6qo](mailto:kg6sjt@ag6qo).#nca.ca.usa.noam

## GIVE YOURSELVES A TREAT!

**When?** April 23, at 9:00 a.m.

**What?** GEARS Club Breakfast

**Where?** Farmer's Skillet Restaurant  
(location: Cohasset & Rio Lindo)  
Chico

**WHY?** Fellowship & fun



Caps embroidered with your name and your call sign may be ordered by contacting WA6ZRT -Gene Telephone #530 -345-3515

**VEC TESTING**  
2:00 p.m.  
April 3, 2016  
June 5, 2016

**AT BUTTE COUNTY  
SEARCH & RESCUE  
BUILDING**

**All Classes  
Technician, General and  
Extra.**

**Contact:**  
Tom Rider-W6JS  
530-893-9211



[Rustyboy rider@aol.com](mailto:Rustyboy rider@aol.com)



## Why You Should Get Your Extra Class License

By Dan Romanchik, KB6NU

The Amateur Extra Class license is the highest class of license in the United States, and perhaps the world. Many hams—even hams that live outside the U.S.—aspire to pass the test and be awarded one.

There wasn't always an Amateur Extra Class license. The Extra class license, as we know it today, was created as part of the 1951 license restructuring, that also created the Novice and Technician Class licenses. (In 1951, the Novice license was the "beginner's license." To get a Technician Class license, you had to pass the written test that General Class operators had to pass.)

Although it gave an operator no additional privileges, to get an Extra Class license, one had to:

- \* Pass a 20 wpm code test (Generals had to pass only a 13 wpm code test).
- \* Pass a longer and more difficult written examination than the General Class exam.
- \* Have at least two years of experience as a licensed radio amateur.

Today, without the code test and the experience requirement, many hams upgrade to Extra Class as soon as they can. Some even pass the Technician Class, General Class, and the Amateur Extra Class exams in a single test session.

So, what's the attraction? Why should you upgrade to Extra?

One of the reasons that you should upgrade to Extra is that you get use of the entire 80 m, 40 m, 20 m, and 15 m bands. Portions of those bands, such as 3.6 - 3.7 MHz in the 75m band and 14.150 - 14.175 Mhz in the 20m phone band, are reserved exclusively for Extra Class licensees. Extra Class operators also have exclusive privileges in the CW portions of the 80 m, 40 m, 20 m, and 15 m bands. These are the frequencies where the DX stations

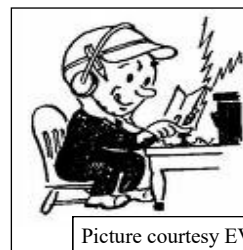
Another reason to get your Extra Class license is that only Extra Class licensees can administer General Class and Extra Class license exams. General Class operators can become Volunteer Examiners (VEs), but they are only allowed to administer Technician Class exams.

Another reason you might want to get an Extra Class license is to get a fancy vanity callsign. Only Extra Class operators can apply for 1×2 or 2×1 callsigns, such as W8RP or KT8K. A short, snappy callsign can help you work more DX or improve your contest scores.

Whatever your reason, studying for the Extra Class exam will open your eyes to many aspects of the hobby that you may not be familiar with. And, as you work your way through the material, you'll learn things that make you a better amateur radio operator and enable you to enjoy the hobby more. It's not easy, but in the end, an Extra Class license will help you have more fun with amateur radio.

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Dan, KB6NU is the author of the "No Nonsense" line of amateur radio license study guides, a prolific blogger ([www.kb6nu.com](http://www.kb6nu.com)), and an active CW operator in the Extra Class portion of the HF bands. If you have any comments, questions, compliments, or complaints, email him at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).



Picture courtesy EVARC

### Tube of the Month

#### HV-1 (A tube that sucks)

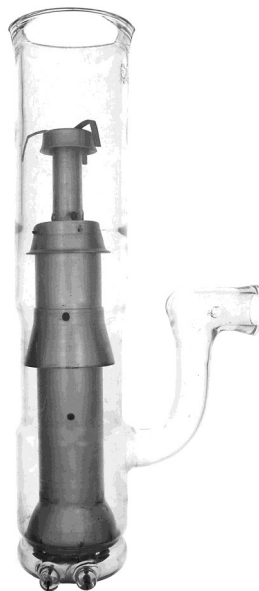
There are vacuum tubes and other devices that require additional vacuum pumping or must be completely pumped down in operation. A transmission electron microscope is like a cathode ray tube where the tube is opened up and the sample to be scanned is placed in the electron beam. The tube is then pumped down before any voltages are applied. A rotary vacuum pump and a series of valves are used to get a vacuum. The microscope I used in college had a bad habit of losing control of the pump and sucking oil into the valve system. It would take me 3 hours to clean it out. Very large tubes like the high power klystrons have diffusion pumps built into the tube to maintain an adequate vacuum.

In 1942, Eimac developed the HV-1, a diffusion pump that was produced for over 20 years. The HV-1 has a heater element in the base that heats a special oil that is vaporized and rises into the tapered aluminum structure in the middle. It works like that stinky Vicks Vaporizer your mother made you smell as a kid.

The top of the tube has a manifold that is attached to the item to be evacuated. This area is cooled by a fan. The oil vapor rises in the column and molecules of gas diffuse into the oil before it condenses on the glass and runs into the base. There are three stages of this process with higher concentrations of molecules near the base. The neck in the side is attached to a mechanical forepump that has the ability to remove the gas. The oil is re-heated and vaporized again. The process can achieve a vacuum of  $4 \times 10^{-7}$  mm of mercury.

The HV-1 I have was made in 1942 and may have been the first unit ever made. It was once donated by Eimac to a museum and had a date tag.

Visit the museum at [N6JV.com](http://N6JV.com)  
Norm N6JV



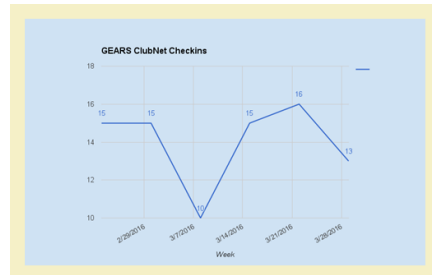
## GEARS Weekly ClubNet Posts Increases

Participation is increasing in the Weekly GEARS ClubNet (every Tuesday at 2000 Local on the W6RHC repeater (146.850)).

From an average a few months ago of 6-8 checkin's each week, as of March 2016, participation in the Weekly ClubNet has virtually doubled.

### Room for More!

Even with the increased traffic, the ClubNet Chair, Rick Hubbard (KI6VOS), assures *The Radiator* there is "...*ample bandwidth available—sufficient to support the entire Club—in fact, every licensed Ham from Willows to Magalia...and beyond!*"



### Fabulous Net Controllers

Commendations to all the fabulous GEARS ClubNet controllers for their contributions to our club and Amateur Radio; thank you:

Dick, W6BIN  
Evelyn, K6QXC  
Lester, KG6KUO  
Ray, KG6MRK  
Rick, KI6VOS

### Join the ClubNet

You're invited! Join the Weekly GEARS ClubNet at 2000 Local on 146.850 (Minus Offset PL110.0). Minus Offset PL110.0).



**The GEARS Newsletter Staff:**

**Editor and Publisher**.....Dorothy Post  
**Printing & Distribution** snail mail: Evelyn Weir  
**Website**...Stephen McDermott W6AKF

The Radiator is a monthly publication of the Golden Empire Amateur Radio Society (GEARS). It is the policy of the Editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio, of interest to GEARS members, and space is available. Please send all submissions to the Editor – Dorothy Post by the last day of the month through the following medium: E-mail:

dj@posthouse.us

**Club Officers: (Board of Directors)**

**President** .....Larry Marcum-ka6gnd  
**Vice President**..... Stephen Wolske-kf6hss  
**Secretary** ..... Dale Anderson-kk6evx  
**Treasurer**.....Rick Hubbard-ki6vos  
**Past President** .....Anna Horn Kg6goa  
**Director**..... Tom Rider-W6JS  
**Director**.....Gene Wright-wa6zrt  
**Director**.....Raymond Foulks-k6mrk

**Club Meetings**

**General Meeting Third Friday 7:00 PM**

**Board Meeting Second Saturday**

**GEARS Club Net**

**Tuesdays 8:00 PM 146.850 MHz-PL 110.9**

**GARS Club Net: Monday, 7:00 pm 147.105+Mhz  
 PL 110.09**

**Thursdays Simplex Net 7:30 p.m. 146.52**

**Sacramento Valley Traffic Net**

**Nightly 9:00 PM 146.850 MHz-PL 110.9**

**ARES Nets:**

**Butte Mondays 20:00 146.850 MHz-PL 110.9**

**Yuba Sutter Thursdays 19:00 146.085+MHz PL 127.3**

**Glenn Thursday 19:30 147.105 MHz +PL 100.0**

**Other Nets:**

**Sac Valley Section Net—7:00 PM 2nd Wed of the month 146.085 MHz+PL 127.3**

**440 Wed. Night 8:00 PM Wednesday 440.650 MHz**

**Golden Bear 7:00 PM Daily 3975 kHz**

**Willie Net 8:00 PM Mondays 1930 kHz**

**Western Public Service System (WPSS)  
 7:30 PM 3952 kHz**

**ARISS (International Space Station) Uplink 144.490 MHz  
 Downlink 145.800 MHz**

**Hope-1 satellite: all uplinks are in 145Mhz band:**

**All downlinks are in 435Mhz band**

**...California Traffic Net: 3906 KHz nightly @6:00 pm**

**For traffic listing & @6:30 p.m. for roll call.**

**QST! QST! QST!**

**You're Invited!**

**8PM Every Tuesday  
 on 146.850**

**QSO with Friends on the  
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**GEARS' ClubNet**

**2000 Local Every Tuesday W6RHC Repeater  
 146.850 Minus Offset PL 110.9**

For Information About GEARS ClubNet, Please Contact:

Any ClubNet Committee Member, or  
 K6WJC Rick Hubbard, ClubNet Committee Chair  
 rick.hubbard@amill.com \* +14156248868  
 www.w6rhc.org

**Carry WD 40 :** You can never anticipate the type of inclement weather you may encounter when you, as a Ham are serving in an emergency situation. You have your 'go bag' and supplies, but one thing you cannot control is the amount of mud your undercarriage, fenders, axles, etc accumulate on your vehicle. Well ...

WD-40 has many uses, but one of its main jobs is to displace water, (WD =water displacement). When applied to steel surfaces, WD-40 can inhibit rust, but also can prevent water and mud from clinging to a surface. This makes it the perfect solution for those situations when you encounter sticky mud and clay that can harden on fenders. Before you leave home, spray your fenders, fender wells, undercarriage, skid plates, and axles with general purpose WD-40. You'll notice that less mud sticks to your vehicle. When you hose it down, that dirt will come off in large clumps even if it's started to dry.

WD-40 can attract dust and dirt and leave a greasy film on your undercarriage. If you can't stand the thought of that but hate the mud, try using a cooking spray for the same mud-repelling effect.

By [Timothy Dahl](#)

Mar 29, 2016—Popular Mechanics on line



Date	Time	Event	Location	Contact party
Sunday, April 3, 2016 June 5, 2016	2:00 p.m.	VEC—Exams	Butte Co. Search & Rescue Building 2591 Morrow Lane, Chico	Tom Rider 530-893-9211
Thursday March 10, 2016	4:30 p.m. Board and General Meeting	GARS-Glenn Glenn Amateur Radio Society General Meeting, & Amateur Radio Emergency Services	Lutheran Church Hall: 565 Main Street Artois	Albert Leyva 530-567-5979
Friday, March 11, 2016		OARS Oroville Amateur Radio Society General Meeting	St Paul's Church Parrish Hall 1430 Pine Street Oroville	Ron Osborne-kd7uhf 530 589 1834 kd7uhf@yahoo.com
Saturday March 12, 2016	Board meet: 9:00 a.m.	GEARS Board of Directors Meet Members are Invited!	Blood Source Blood Source Bldg 555 Rio Lindo Ave	Larry Marcum, KA6GND 530 345 5399 ka6gnd@gmail.com
Friday March 18, 216	General Meeting Social 6:30 p.m. Program: At 7:00 General meeting 8:00 p.m.	GEARS Golden Empire Amateur Radio Society	Butte County Search and Rescue Building 2591 Morrow Lane Chico	Larry Marcum, KA6GND 530 345 5399 ka6gnd@gmail.com
Saturday April 23	GEARS Club Breakfast 9:00 a.m.	GEARS	Farmer's Skillet Corner of Rio Lindo & Cohasset Chico	

**Donations to GEARS are TAX DEDUCTIBLE**

We are a 501 c 3 organization, and as such, donations cash, or materials, donated to GEARS are Tax deductible. When you donate to GEARS, be sure you receive a letter of acknowledgment from our Secretary as proof of the donation and its value for the State and Federal Tax Authorities. This is a win-win for GEARS and for you, the member or the party donating!

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